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ABSTRACT

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Self-Definition and Peer Relations in Two-Year-Old Boys

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Abstract

The major hypothesis of the present study is that interest and competence in interacting with age-mates emerges in two-year-olds out of the process of defining self as separate from other in the context of the mother-child bond during the first two years. Seventy-eight two-year-old boys were administered four measures of self-definition and 40 were then paired with like-scoring peers in two peer interaction sessions. A different pattern of interaction was found for High and Low scoring boys. Boys who showed clearer self-definition initially defined their "territory" with a peer through claiming toys and subsequently increased positive verbal interaction. Low scoring boys increased only exchanging and showing toys to a peer over time. Self-definition was also found to be related to interferences in the mother-child bond. High scoring children had had briefer separations from their mothers, particularly during the first year of life. They were less likely to have siblings and their mothers held more positive attitudes about reciprocal interaction with their child.

Self-Definition and Peer Relations in Two-Year-Old Boys

The infant's social world soon expands beyond the earliest bonds to a caretaker to encompass developing interest and competence in interaction with peers. One approach to the explanation of this development is based on the finding that secure attachment to a caretaker is related to later competence in peer interaction. Waters, Wippman, and Sroufe (1979) suggest that secure attachment promotes social exploration, positive affect, and generally positive adaptation. As a result, a securely attached child will be more likely to show competence in peer interaction. However, this general approach does little to explain the developmental aspect of peer relationships. In the present study a more detailed, developmental approach will be examined based on the framework provided by Mahler, Pine and Bergman (1975) in their study of the separation-individuation process of infants and toddlers. As the child develops out of an early symbiosis with the mother through the process of separation-individuation, he develops a clearer sense of himself as separate from others and of others as unique individuals. By age two the child has begun to consolidate both his own boundaries and his understanding of the constancy of other people. The major hypothesis of the present study is that it is out of this process of defining self and other in the context of the mother-child bond that interest and competence in interacting with age-mates emerges. Three specific hypotheses are made about the relationship between the clarity of a child's self-definition and major aspects of peer interaction at age two.

Self-Definition and Peer Relations

Increased interest in peers. As the child develops a clearer sense of himself and an internalization of his mother, he will be more free to move from her side and interact with other children. It is predicted that two-year-old children who have defined self more completely will show greater interest in their peers and will interact more with them than will children who have not yet so clearly defined self as separate from others.

More sophisticated interactions. A second aspect of self development is the growing awareness of the other as a source of social interaction and initiation. It is predicted that children with a clearer definition of self will show not only more interaction with a peer, but a more sophisticated form of interaction, involving accommodation to one's partner.

Different pattern of interaction. Previous studies of peer interaction have simply reported overall amounts of interactive behavior with peers, even when sequential interaction is described. In the present study, peer interaction is presumed to be a developing and changing process that should not be looked at simply in total quantity, but with comparisons made between initial greetings and later interaction. It is predicted that the pattern of interaction over time will differ according to the child's level of self-definition. Children with a clear definition of self will show interest in peers after an initial wariness. However, they will also be aware that the other child can intrude on them in negative ways, perhaps by taking a desired toy. Self-boundary

protecting behavior will emerge in which each child will determine what is "mine" and what "belongs" to the other child. Once this initial determination is made, the pair will begin to interact in a more prosocial way through toys and other communication. For the children with a less firm sense of self, there may be an initial interest, but they are more likely to retreat back to interaction with mother and/or toys.

Self-Definition and the Mother-Child Relationship

Mahler's theory will also be examined in regard to the relation she posits between mother-child interaction and the emergence of self-definition. Three specific hypotheses are made: History of separations. Disruptions in the attachment bond through long and/or difficult separations between mother and child are likely to affect the separation-individuation process leading to a sense of self at age two. Daily separations might have a similar impact if they were lengthy. Presence of siblings. The presence of siblings in the home seems likely to affect the mother-child relationship and the child's development of self-definition. Children with no competition for their mother's attention may develop a clearer sense of self at age two through more direct interaction with the mother. Maternal attitudes. Finally, the mother's attitudes about the importance of the early attachment with her child are likely to contribute to the child's ability to internalize the mother's comforting presence as he separates from her and develops a sense of self. The mother's attitudes around encouraging appropriate autonomy and self-expression in the child will also contribute to his growing sense of self.

Method

Design of the Study

Two-year-old boys and their mothers were seen in individual mother-son pairs for approximately 75 minutes. The children were administered four tests, designed to assess the child's level of self-definition. Children were then assigned to the group classified as High in self-definition if they passed at least three of these tests or to the group classified as Low in self-definition if they passed two or fewer of the tests.

Information was obtained from the mothers concerning the occupation and education of each parent, birth order of the child, prematurity, hospitalizations, child care arrangements, experience with peers, and history of separations between child and parents. The child was administered the Peabody Picture Vocabulary Test. The mothers were given the Maternal Attitude Scale, developed by Cohler, Weiss and Grunebaum (1970).

Forty children were then paired together on the basis of each child's performance on the self-definition tasks. Children were paired to form 10 High pairs and 10 Low pairs. Each pair met for two 20 minute sessions, during which they were free to interact with each other, toys, and their mothers. Their interactions were coded from the videotapes.

Subjects

Seventy-eight boys between the ages of 22 and 28 months ($\bar{x}$ = 24 months) were primarily from professional and white collar Caucasian families in which the mother was the main caretaker. In order to minimize

the role of siblings as playmates, subjects chosen were either first-born or did not have siblings under five years of age. Of the sample of 78 boys, 40 were selected for the second phase of the study. The selection was designed to create High and Low self-definition groups that were comparable in age.

Settings and Equipment

Subjects were tested in an 8' x 12' playroom. Videotaping was done either through a one-way mirror or through an opening between two curtains. The same set of toys was available for each pair of children during both sessions.

Assessment of Self-Definition

The self-definition assessment consisted of the following four tasks.

Mirror self-recognition. This measure is based on that of Brooks-Gunn and Lewis (Note 1). The child was first observed in spontaneous activity in front of a full-length mirror. The mother then took a cloth with rouge hidden on it. She first wiped a toy with the clean part of the cloth, commenting that the toy was dirty. She then wiped the child's nose with the cloth, secretly getting some rouge on it. The child's attention was directed to the mirror. After a few minutes the mother asked the child to wipe off the red mark with his hand. Finally, she pointed to the mirror and asked "Who is that?". A child passed this task when he (a) touched his nose following application of the mark, (b) wiped his face first in response to the request to wipe the mark, or (c) labeled his mirror image as "me" in response to the question "Who is that?".

Pronoun recognition. This measure, based on that of Sharpless (Note 2) assessed the child's understanding of the possessives "my" and "your." The mother asked her child to perform in random order five actions directed at mother ("my") and to himself ("your"). The actions included touching and tickling the toes, nose and stomach, and combing hair. The child passed this task if he did 2-3 actions, including one "my" and one "your," correctly; 4-6 actions with one error but both "my" and "your" performed correctly once; 7-10 with two errors, but "my" and "your" answered correctly once.

Perceptual role-taking. The measure was derived from that of Lempers, Flavell and Flavell (1977). The mother asked her child to show her various objects (a stuffed animal, picture cards, a cardboard figure on a pole, and his own back). She then asked him to show an object blocked to her vision by a piece of cardboard that could be moved. Finally, the child was asked to name or point to the object the experimenter or the mother was looking at. A child passed this task if he was able to orient the object so the mother could see it for three tasks, while responding with incorrect answers to no more than two of the other three items (the third answer being simply no response). The child also passed if he answered correctly two of the three more difficult items, with no more than two others answered incorrectly.

Pronoun production. A child passed this task if his mother reported that he used either "I" or "me" in a flexible way with no regular confusions of "I" or "me" with "you." Observations of self-labeling during the course of testing were recorded to supplement the mother's report.

Background Variables

The following information was obtained from the mothers during the first session: 1. Parental variables--occupation and education; 2. Child variables--a. Child care experience, including current setting and duration of child care outside the family, b. Peer experience, including the average length of time per week spent with other children, c. History of separations, including length and age of longest separation(s) from both parents. It was also noted whether the child had ever been hospitalized.

Maternal Attitude Scale

The Maternal Attitude Scale is a pencil and paper measure of child-rearing attitudes developed by Cohler, Weiss and Grunebaum (1970) and based on Sander's (1962) theory of developmental stages in the mother-child relationship.

Peabody Picture Vocabulary Test

This test was chosen as a general assessment of intelligence because it is brief and has high interest value for young children. Only the raw score for the first 51 items was used.

Peer Interaction Sessions

The peer interaction sessions were held as soon as possible after the initial session and were themselves between one and seven days apart. During the sessions the mothers remained in the room, but did not initiate interaction. The experimenter left the room to videotape the session.

All coding of the peer interaction sessions was done from the videotapes. Both children's behavior was coded continuously. Behaviors coded

are described briefly in Table 1. (Detailed descriptions can be found in

Insert Table 1 about here

Levine, 1980.) Behaviors were coded either by total duration of the behavior, or by a time-sampling method by which a simple occurrence or absence of the behavior during a 12 second interval was coded. Four behaviors were coded on a pair-wise basis, the remaining behaviors being coded for each child individually. As the individual scores of each child in a pair are not independent, a pair-wise score was created by adding the two individual scores. The scoring for each behavior was divided into two 10-minute time segments during each 20-minute session. Thus, each pair of children received four scores, two per session, for each variable.

Reliability was assessed through a comparison between two coders' independent ratings of five 20-minute tapes for each variable. For this purpose, each session was divided into four five-minute periods, resulting in 20 scores per pair. The correlation coefficients between the two observers' scores ranged from .82 to .99, except for Physical affection (.71), Negative verbalizations (.73), and Negative use of the toy (.75).

Results and Discussion

Self-Definition and Peer Interaction

For each of the observational variables, differences between High and Low pairs were assessed by a 2x2x2 repeated measures analysis of variance. The factors were the self-definition score (High vs. Low), session (first vs. second) and time within each session (first 10' vs.

second 10').

Increased interest in peers and more sophisticated interaction. In examining the main effect of self-definition on the dependent variables, it was found that children in the High group scored significantly higher on the two verbal categories "Mine" ($M_{(Low)} = .85$, $M_{(High)} = 2.88$; $F_{(1,18)} = 4.64$, $p < .05$) and Comment on peer ($M_{(Low)} = .20$, $M_{(High)} = 1.78$; $F_{(1,18)} = 4.95$, $p < .05$). No other main effects were found, either in variables reflecting involvement with or disinterest in peers or in those reflecting greater sophistication in interaction.

The greater production of "Mine" and Comment on peer in High pairs can be interpreted in several ways. It could be argued that this result simply indicates a greater verbal skill among High children. Although the two more general verbal categories, Positive and Negative verbalization, do not differ for High and Low groups, the categories "Mine" and Comment on peer involve more specific, understandable verbalization and might involve greater language ability. Although there is no measure of proficiency of verbal production in this study, it was found that receptive verbal skills, as measured by the PPVT, were greater for the children scoring High in self-definition.

However, there is evidence to oppose this argument. The argument is based on the assumption that children do not produce these verbal categories because they cannot produce them. However, when simple occurrence of "Mine" is examined, there are two High pairs that never produce the verbalization and only three Low pairs that never produce it. Thus, seven of the 10 Low pairs can say "Mine" but do not do so in the same way

as the eight High pairs do. There is a greater difference when the category Comment on peer is examined. However, according to mothers' reports, at least one child in seven of the 10 Low pairs could say either "baby" or "boy." Thus, the Low pairs appear to be able to produce these categories of behavior, but do not produce them in frequencies as great as the High pairs in the peer interaction sessions.

Although it can be argued that these measures are not simply measures of greater verbal proficiency, it is also not clear that they can be interpreted as measures of either greater interest or greater skill in interaction with peers. What seems more striking is that the children High on self-definition are more involved overall in defining self vs. other. They are more likely to claim a toy as belonging to them and to define it as "Mine." They are also more likely to try to define the other child in some way, either by commenting on his activities or on his possessions.

Different pattern of interaction. Significant differences were found in the patterns of interaction over time for pairs High and Low in self-definition. Significant interactions were found between classification on self-definition and time within session for the variables "Mine" ($F_{(1,18)} = 5.57$, $p < .05$) and Positive verbalization ($F_{(1,18)} = 4.55$, $p < .05$). Mean scores for each session shown separately are represented graphically in Figure 1. Confidence intervals based on Scheffé lengths

Insert Figure 1 about here

were used to compare individual means (Winer, 1962). All results are

based on a significance level of .05. Examining each session separately, it was found that the High group increased significantly the use of "Mine" between the first and second halves of the first session and used "Mine" significantly more often than the Low group during the second half of the first session. This difference was not significant during the second session. Combining the two sessions, it was found that the High group used significantly more Positive verbalization than the Low group during the second half of the sessions.

It was also found that the Positive use of a toy with the peer appeared to increase between sessions one and two for the Low pairs ($M_1 = 1.45$, $M_2 = 2.55$), while it decreased for the High pairs ($M_1 = 1.90$, $M_2 = 1.15$) ($F_{(1,18)} = 4.70$, $p < .05$). Post hoc analyses based on Scheffé lengths revealed that Low pairs showed more Positive use of a toy with the peer than High pairs did during the second session ($p < .05$).

It had been hypothesized that High pairs would follow an initial wariness, mixed with interest, with self-boundary protecting behavior, specifically claiming toys as "Mine." Once the boundaries were established they could then begin to interact in a more positive way. The findings in regard to the category "Mine" and Positive verbalization are consistent with this hypothesis. Children whose self-definition was clearer used interaction around toys to define boundaries between themselves and the other children. When the boundaries were established, the claiming of toys decreased, while positive interaction continued. Thus, claiming toys was not simply a negative or aggressive behavior, but appear to be an important part of the child's definition of himself within

his social world. Low pairs showed a different type of interaction as shown by a greater Positive use of a toy during the second session. Both Holmberg (Note 3) and Mueller and Vandell (1978) have indicated that offering and showing toys are among the earliest peer directed behaviors to develop. Thus, Low pairs may maintain a positive orientation to a peer, but lack the skill to engage in more complex forms of interaction. It also seems that toys have not as yet become incorporated into these children's sense of self.

Background of Self-Definition: Mother-Child Relationship

History of Separations. Both the length of separations from the mother and the age of the child at separation were significantly related to the child's self-definition score. (See Table 2.) High scoring chil-

Insert Table 2 about here

dren were more likely than Low scoring children to have had only separations of two nights or less (Fisher's exact test, $p < .02$). The children who had experienced separations of more than two nights were then divided by age at separation, eliminating the two High and two Low children who had had separations of more than two nights both before and after one year of age. None of the High children had had such separations between birth and one year of age, whereas seven of the Low children had (Fisher's exact test, $p < .05$). A similar number of High and Low children had had separations of more than two nights between one and two years of age. In regard to daily separations, chi-square analyses revealed no relation between either the amount of time per day that the mother worked or the

amount of time the child spent away from both parents in child care and self-definition scores.

Thus, daily separations and more lengthy separations appear to have a different impact on the child's developing self-definition at age two. Longer separations may disrupt the child's sense of trust in the care provided by the mother. The internalization of her care that forms the basis for developing self-definition may then become more difficult. However, when briefer separations occur in a predictable way, the child may not experience such an extreme emotional reaction. These findings may have important implications for issues of substitute caretaking.

Birth order. There was a significant relation between birth order and self-definition scores. Children with no siblings were significantly more likely to score High in self-definition than children with siblings ($x^2 = 11.12$, $p < .001$). Children who do not have to compete for the mother's attention with a sibling in the home may be better able to develop a sense of self-definition at the two year level.

Maternal Attitude Scale. The relation between self-definition scores and scores on the scales of the MAS was examined through a series of one-way analyses of variance. Self-definition was found to be related significantly to one scale out of 10 in the MAS, labeled "Reciprocal exchange and interaction" ($F_{(1,77)} = 4.3$, $p < .05$). The large number of analyses should indicate caution in the interpretation of this result.

Self-Definition Measures

Internal consistency. A series of 2x2 chi-square analyses were carried out to determine the relation between each of the dichotomous self-

definition measures. Missing data were eliminated from the analyses. Pronoun recognition, role-taking and pronoun use were all significantly interrelated ($p < .05$). Mirror self-recognition was related only to pronoun use ($p < .01$). This may result from the fact that mirror self-recognition is a skill that is usually developed at a younger age than are these other aspects of self-definition. Another possibility is that mirror self-recognition is based on a different ability. In the other three tasks, children demonstrate their differentiation of "me" and "you." However, the mirror self-recognition is based on a differentiation of "me" and "not me." Children must recognize themselves and also know that the "self" in the mirror is not their real body but is related to it.

The developmental sequence of the four tasks was examined to determine whether it conformed to a Guttman scale. The number of subjects passing each task and the pattern in which they were passed is shown in Table 3. Green's (1956) index of consistency was .50 for the total sample

Insert Table 3 about here

of 78 subjects and .58 for the subsample of 40. Green states that a set of items may be labeled "scalable" if the index of consistency is greater than .50. It seems clear that mirror self-recognition and pronoun recognition precede developmentally pronoun use and this form of role-taking ability, but a finer distinction between these four tasks is difficult to justify on the basis of these equivocal findings.

Other correlates. One-way analyses of variance revealed no relationships between socioeconomic variables and self-definition scores. For

only the large sample, age was significantly related to self-definition, with older children more likely to score High. The fact that children who were an average of 24 1/2 months of age were significantly more likely to be High on this scale than children who were an average of 23 1/2 months of age seems to support the usefulness of these tasks for assessing changes in this age group.

As determined by a one-way analysis of variance, children classified as High in self-definition were more likely to have a high score on the PPVT ($F_{(1,65)} = 19.5$, $p < .001$). This finding could indicate that children's performance on the self-definition tasks reflects simply receptive language skills. However, there seems to be a more general issue that may underlie performance on both the PPVT and the self-definition tasks. Performance on the PPVT consists of understanding a spoken word, recognizing pictures, and relating these two symbols, word and picture, to one another. Clearly the ability to understand symbolic representation is an important aspect of ability on this test, particularly for the age group in this study.

There is evidence that development of symbolic representation is also important in the development of self, as measured at age two. Bertenthal and Fischer (1978) found that stages in the development of self-recognition in children six to 24 months of age corresponded quite closely to stages in the development of object permanence which is the first evidence of symbolic representation in the child. Fraiberg and Adelson (1973) and Drucker (1979) suggest that the ability to differentiate self from other is linked to the ability to manipulate symbols.

Both the PPVT and the self-definition tasks may reflect the child's development of symbolization at age two. At this age the child begins to represent self and other in a symbolic way through use of pronouns and a clearer representation of his body. Similarly, he is more able to understand other symbols in his world; i.e., language and pictures. Future studies can help to clarify this issue through direct examination of measures of symbolic representation.

Conclusion

In the present study a model of the social development of young children was proposed that was based on the separation-individuation process leading to a sense of self as separate and unique at age two. It was proposed that the child's ability to represent self and other as unique individuals would affect the nature of his interaction with peers at age two. The evidence of the present study was found to be consistent with the proposed model in several specific ways.

The self-definition measures were related to measures indicative of cognitive development (PPVT) and of interferences in the emotional bond between child and parent (separations, presence of siblings, negative maternal attitudes around reciprocal interaction with the child). The impact of both cognitive and emotional factors on self-definition is consistent with the theory of separation-individuation proposed by Mahler, Pine and Bergman (1975). They clearly see this process as consisting of two parts. Individuation includes "the evolution of intrapsychic autonomy, perception, memory, cognition, reality testing" (p. 63). Thus cognitive growth is an important part of development of self at age two. The second

track is separation, which is based on the child's relationship with his mother and his growing tendency to strike out on his own, in the secure knowledge that his mother is there if he needs her. In the present study, the evidence is consistent with Mahler's suggestion that both cognitive and emotional factors are essential in the development of a sense of self as separate and unique at age two.

It was further found that self-definition as assessed by these measures was related to aspects of the two-year-old's interaction with his peers. Boys with a clearer sense of self at this age spent more time defining their property and also became more involved in a positive way with peers as they became more comfortable with them. Boys with a less clear sense of self engaged in simpler forms of interaction, with little attention to the definition of their property. It appears that the claiming of toys and property may be linked with the child's separation of self and other, and as such is an important developmental step. It may be part of a stage that prepares the child for social interaction that relies on a clear understanding of self and other as separate individuals who must be aware not only of their own needs and wants, but also of the other's needs and wants.

The conclusions based on the present study must be restricted to Caucasian middle-class boys of about 24 months of age. Obvious next steps in this line of research are to see whether girls and/or boys of different ethnic backgrounds show this same pattern. In addition, self-definition is an ongoing process. It would be interesting to explore the ways in which older children refine this differentiation between self and other, and the impact this development has on their social interactions.

Reference Notes

1. Brooks-Gunn, J. & Lewis, M. Mirror-image stimulation and self recognition in infancy. Paper presented at the biennial meeting of the Society for Research in Child Development, Denver, March 1975.

2. Sharpless, E. A. While linguistic complexity does not constrain the acquisition order of relational words, the reverse may be true: Evidence from person pronoun acquisition. Unpublished manuscript, City University of New York.

3. Holmberg, M. C. The development of social interchange patterns from 12-42 months: Cross-sectional and short-term longitudinal analyses. Paper presented at the biennial meeting of the Society for Research in Child Development, New Orleans, March 1977.

References

Bertenthal, B. I., & Fischer, K. W. Development of self-recognition in the infant. Developmental Psychology, 1978, 14, 44-50.

Cohler, B. J., Weiss, J. L., & Grunebaum, H. U. Child-care attitudes and emotional disturbance among mothers of young children. Genetic Psychology Monographs, 1970, 82, 3-47.

Drucker, J. The affective context and psychodynamics of first symbolization. In N. R. Smith & M. B. Franklin (Eds.), Symbolic functioning in childhood. Hillsdale, N. J.: Lawrence Erlbaum Associates, 1979.

Fraiberg, S., & Adelson, E. Self-representation in language and play: Observations of blind children. Psychoanalytic Quarterly, 1973, 42, 539-562.

Green, B. F. A method of scalogram analysis using summary statistics. Psychometrika, 1956, 21, 79-88.

Lempers, J. D., Flavell, E., & Flavell, J. H. The development in very young children of tacit knowledge concerning visual perception. Genetic Psychology Monographs, 1977, 95, 3-53.

Levine, L. E. Self-definition and peer relations in two-year-old boys. (Doctoral dissertation, The University of Michigan, 1979). Dissertation Abstracts International, 1980, 40. (University Microfilms No. 80-7777).

Mahler, M. S., Pine, F., & Bergman, A. The psychological birth of the human infant. New York: Basic Books, Inc., 1975.

Mueller, E., & Vandell, D. Infant-infant interaction. In J. Osofsky (Ed.), Handbook of infant development. New York: Wiley Interscience, 1978.

Sander, L. W. Issues in early mother-child interaction. Journal of the

American Academy of Child Psychiatry, 1962, 2, 141-166.

Waters, E., Wippman, J., & Sroufe, L. A. Attachment, positive affect, and competence in the peer group: Two studies in construct validation. Child Development, 1979, 50, 821-829.

Winer, B. J. Statistical principles in experimental design. New York: McGraw-Hill Book Co., Inc., 1962.

Table 1

Observational Coding System

1. Positive engagement with peer
   a. Proximity to peer[1,2]
   b. Toy play
      (1) Positive use of the toy with peer
      (2) Use of the same toy[1,2]
      (3) Use of duplicate toy[1,2]
   c. Imitation
      (1) Imitative events
      (2) Imitative sequences[1,2]
   d. Verbalization
      (1) Positive vocalization to peer
      (2) Comment on peer
   e. Positive affect
      (1) Smiles at peer
      (2) Physical affection to peer
2. Self-separating interaction with peer
   a. Negative use of toy with peer
   b. Verbalization
      (1) "Mine": claiming toys
      (2) Negative vocalization to peer
3. Non-engagement with peer
   a. Proximity to mother[1]
   b. Interaction with mother[1]

c. Interaction exclusively with toys

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1. Coded by duration

2. Coded on a pair-wise basis

Table 2

Relation Between Length of Separations

and Self-Definition Score

		Self-Definition	
Length of Separation	Age	High	Low
None		12	8
1-2 nights		17	11
3-5 nights	0-1	0	1
	1-2	1	0
	both	0	2
> 5 nights	0-1	0	6
	1-2	6	9
	both	2	0
missing		2	1

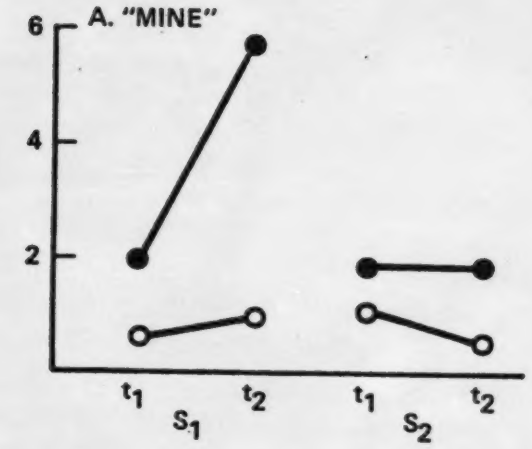
Table 3

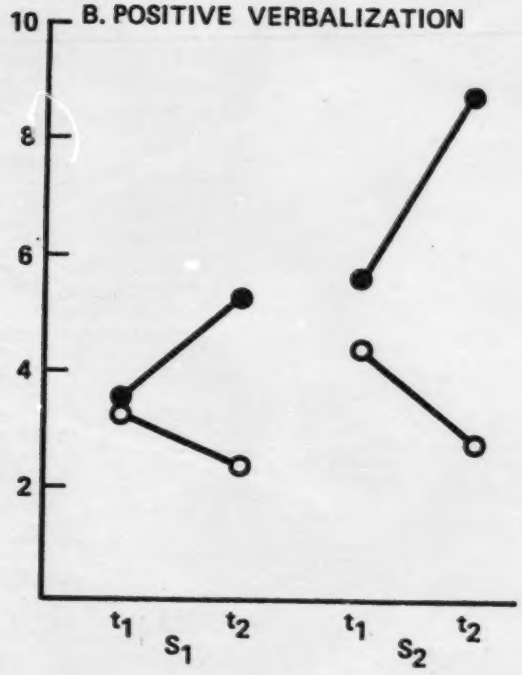
Number of Subjects Demonstrating Each Pattern of Self-Definition Tasks Passed and Failed

Sample of 78	Pronoun Recognition	Mirror	Pronoun Use	Role-Taking	Sample of 40
		Standard Patterns			
3	-	-	-	-	2
5	+	-	-	-	4
20	+	+	-	-	9
12	+	+	+	-	5
23	+	+	+	+	12
63					32
15		Non-standard Patterns			8
		No. of subjects passing each task			
Sample of 78	68	67	37	31	
Sample of 40	33	34	17	15	

Figure Caption

Figure 1. Mean number of occurrences of each category of peer interaction during each 10-minute period during two sessions.





● Pairs scoring HIGH on self-definition
○ Pairs scoring LOW on self-definition